## **Claims**

What is claimed is:

- 1. A dialysate composition comprising citrate at a concentration ranging from 2.4 to 20 mEq/L, calcium at a concentration ranging from 2.5 to 5 mEq/L, and magnesium at a concentration ranging from 1 to 2 mEq/L.
- 2. The dialysate composition of claim 1, prepared by a process comprising dissolving 25-40 mEq of sodium bicarbonate per liter of water.
- 3. The dialysate composition of claim 1, prepared by a process comprising dissolving 110-140 mEq of sodium chloride per liter of water.
- 4. The dialysate composition of claim 1, prepared by a process of dissolving trisodium citrate in water.
- 5. A method of performing dialysis, comprising selecting a patient suffering from chronic acidosis, and performing dialysis on the patient with a dialysate according to any one of claims 1-4.
- 6. A method of performing dialysis, comprising selecting a post-operative patient suffering from acute kidney failure, and performing dialysis on the patient with a dialysate according to any one of claims 1-4.
- 7. A method of performing dialysis, comprising selecting a patient that is heparin-free, and maintaining that patient in a heparin free state while performing dialysis on that patient with a dialysate according to any one of claims 1-4.

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- 8. A method of increasing the re-use of dialyzers, comprising performing dialysis on a patient with a dialysate according to any one of claims 1-4.
- 9. A method of increasing the dose of dialysis during a dialysis treatment, comprising performing dialysis with a dialysate according to any one of claims 1-4.